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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,968	07/10/2001	Zan Gullickson	115.9	8217

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EXAMINER

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 04/14/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,968

Applicant(s)

Gullickson et al

Examiner

Greg Binda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 6, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 8-11, and 13-18 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 8-11, and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jul 10, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Mar 6, 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. The amendment filed Mar 6, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is: "a [shear zone 60 that has] a radially inwardly curved shape, or bowed profile" added to the paragraph bridging pages 6 & 7. This objection is valid regardless of whether the radially inwardly curved shape, or bowed profile is shown in the drawings because this profile shape is the best mode contemplated by the inventor (see item 7 below). When the best mode is inserted into the specification subsequent to filing, that insertion must be objected to under 35 U.S.C. 132. See MPEP 2165.01V

Applicant is required to cancel the new matter in the reply to this Office Action.

Drawings

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on Mar 6, 2003 have been approved.

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4. The drawings are objected to because the lowermost numeral 70 in Fig. 3 should be changed to 72. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 6, 8, 9, 11, 13/11 & 14-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a. Claims 6, 11, 16 & 17 recite the limitation, “an inwardly [bowed or curved] profile”.

There does not appear to be a written description of this limitation in the specification as originally filed. Applicant argues that the description, “an inwardly curved or bowed profile” was added to the specification in order to clarify the original description “turned down”. In doing so, applicant clearly admits the original description “turned down” was by itself, an inadequate description and therefore the words added to the description to enhance (i.e. clarify) the original

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description must be subject matter which was not described in the original specification.

Furthermore, the process of turning down (i.e. "grooving" as on page 1, line 97 of Brown, US 1,574,466) does not necessarily provide an inwardly curved or bowed profile per item 3.1 of the amendment filed Mar 6, 2003.

b. Claim 14, lines 19+ recites the limitation, "said shear bolt being removable from said coaxially engaged coupling members without increasing said desire clearance upon disengaging said fastening assemblies from said recessed portions". There does not appear to be written description of this limitation in the specification as originally filed

7. Claims 6, 8-11 & 13-18 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon the fact that applicant failed to disclose in the specification (see item 6a above) that the shear zone 60 must have an inwardly curved or bowed profile. Such a profile, applicant now states, is critical because it provides "a means of reliably attaining a pre-set diameter of the bolt's shear zone, and thus a more precise and predictable shear resistance of the shear bolt" and because such a profile "urges rupture away from the shoulders 52 which can adversely affect the bolt's shear resistance/capacity" (see item 3.2.1 in the amendment filed Mar 6, 2003). Applicant must have know this type of profile was the best mode at the time of filing because it was included in the originally filed drawings (see last paragraph on page 7 of the amendment filed Mar 6, 2003).

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8. Claims 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 14, line 15 recites the limitation, "aligned slots in said first and second flanges".

It is not clear if these slots are the same as, or different from the slots in lines 3 & 7.

b. Claims 16 & 17 each recite the limitation "a first portion". It is not clear if this first portion is the same as, or different from the first portion in claim 14, line 10.

c. Claim 18 recites the limitation "said slot" in line 3. There is insufficient antecedent basis for this limitation in the claim because no single slot is previously identified.

9. Claims 10, 13/10, 14, 15, 18/15/14 & 18/14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential element(s), such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is a shear area with a radially inwardly curved or bowed profile. Such a shear area is essential/critical to the operation of the invention. See item 7 above.

Claim Rejections - 35 U.S.C. § 103

10. Claims 6 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, US 1,574,466 in view of Mellinger, US 5,697,929. Figs. 1-3 show a shear bolt (page 1, line 82) for

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joining coupling members 10 & 11, the shear bolt comprising: an elongate core element 15 having a first portion 15c forming a shear area of a given shear strength; a second portion 15d on each side of the first portion 15c forming a shoulder 15d of larger diameter than the first portion 15c adapted to provide a pre-set spacing between opposed coupling members 10 & 11; and a third shaped portion 15a extending from each shoulder 15d adapted to receive a fastening member 15b to securely connect the first and second coupling members 10 & 11. Fig.1 shows a washer element with an aperture inserted on each end 15a of shear bolt 15. Brown does not expressly disclose making the shear area of the first portion with an inwardly bowed profile. In col. 3, lines 6-19 ^{Mellinger} teaches making a shear area portion 30 with an inwardly bowed profile (see "radiused" in line 11) in order to provide a shear area that will shear evenly and with a consistent range. It would have been obvious to one of ordinary skill in the art to modify the shear bolt of Brown by making the first portion shear area with an inwardly curved or bowed profile in order to provide a shear area that will shear evenly and with a consistent range as taught by Mellinger.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown, US 1,574,466 in view of Glitsch, US 2,52,217. Figs. 1-3 of Brown show a shear bolt coupling assembly comprising: a first coupling member 10 with a first radially extending flange 10 with a plurality of open ended slots 10b, c; a second coupling assembly 11 located coaxially with the first coupling member 10 and having a second radially extending flange 11 with a plurality of open ended slots 11b, c; and an elongate shear bolt 15 (see also page 1, line 82) having a first portion

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15c forming a shear area of a given shear strength, a second portion 15d on each side of the first portion 15c forming a shoulder 15d of larger diameter than the first portion 15c for abutting each of the first and second flanges 10 & 11 to provide a desired clearance therebetween (see also page 1, lines 87 & 88), and a third shaped portion 15a extending from each shoulder 15d adapted to receive a fastening member 15b to secure the shear bolt 15 with the first and second flanges 10 & 11, thereby securely connecting the first and second coupling members 10 & 11. On page 1, lines 82-86, Brown discloses that the third portion is shaped so as to rigidly engage the slots 10b,c & 11b,c. Brown does not expressly disclose making the third portion 15a with opposed planar surfaces. In col. 1, lines 42-46, Glitsch teaches making a bolt with a shaped portion having radially opposed planar surfaces in order to provide the bolt with a means to snugly fit within a slot. It would have been obvious to one of ordinary skill in the art to modify the shear bolt 15 of Brown by making the third shaped portion 15a with radially opposed planar surfaces in order to provide the bolt 15 with a means to snugly fit (i.e. rigidly) within the slots 10b,c & 11b,c as taught by Glitsch.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Mellinger as applied to claim 6 above, and further in view of Glitsch for the same reasons noted immediately above.

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13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Glitsch as applied to claim 10 above, and further in view of Mellinger for the same reasons noted item 10 above.

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Glitsch as applied to claim 10 above, and further in view of Grauel, US 1,704,939. In Fig. 1 Brown shows a washer element having an opening inserted on the third portion 15a of shear bolt 15, but does not show the washer adapted to register with a correspondingly shaped recess in a respective flange 10 or 11. On page 1, lines 1-7 and 64-79, Grauel teaches providing a bolt with a washer element 5 having an opening 6 such that the washer 5 is adapted to register with a correspondingly shaped recess 3, 4 in a respective flange 1 in order to provide a means for adjusting the radial spacing of the bolt. It would have been obvious to one of ordinary skill in the art to modify the assembly of Brown by providing the shear bolt with a washer adapted to register with a correspondingly shaped recess in a respective flange 10 or 11 in order to provide a means for adjusting the radial spacing of the bolt as taught by Grauel.

Response to Arguments

15. Applicant's arguments filed Mar 6, 2003 have been fully considered but they are not persuasive. In response to applicant's argument that Glitsch shows some structure which teaches away from the claimed invention, the test for obviousness is not whether the features of a

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secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can

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normally be reached Monday through Thursday from 9:30 am to 7:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne, can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 (before final), (703) 872-9327 (after final) and (703) 872-9325 (customer service).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



GREGORY J. BINDA
PRIMARY EXAMINER